

# Improving classic Monastrell wines by means intraspecific hybrids.

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## Introduction

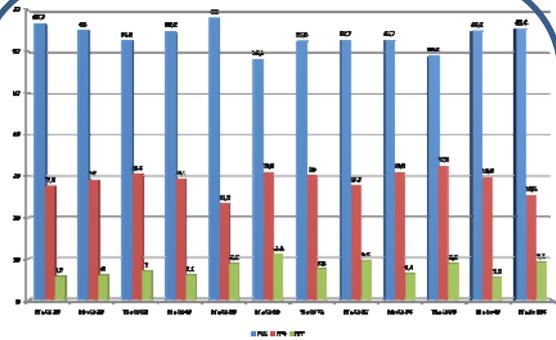
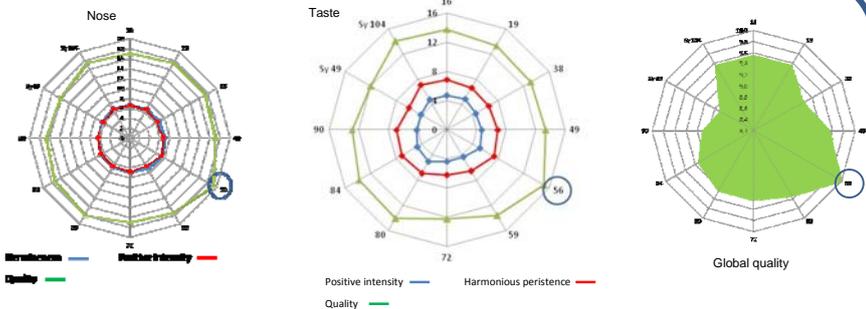
During the three last years, we have made these 12 crosses individually, obtaining very promising results in the content and profile of phenolic compounds: anthocyanins, flavonols and tannins, and in their chromatic characteristics: colour intensity and tone, obtaining in all cases higher quality wines than Monastrell and Cabernet Sauvignon wines. Therefore, the aim of this research is to obtain new varieties for the wine sector to maintain the Monastrell typicality but improved other features, using classical tools.

## Material and methods

Our research group has more than 800 hybrids that are sited in our experimental vineyard El Chaparral (Murcia, Southeast Spain), Brown on trellises and deficit irrigation. Among all crosses, in 2005 we selected 10 hybrids from Monastrell x Cabernet Sauvignon whose enological potential was very high. The selection criteria considered were the following:

1. Hybrids with high content of anthocyanins and other flavonoids, and also having an adequate anthocyanin profile to ensure stable colour in wine, and greater ease of extractability of these compounds.
2. Hybrids with long ripening cycles, better adapted to increase temperatures experienced in our areas.

## Results and discussion



**Chromatic characteristics:** Intensity was higher in M x Sy 49 and 104. All wines showed high copigmented compounds.

**Flavonol composition** was higher in M x Cs 56.

**Anthocyanin composition:** Higher acylated percentage was showed in hybrids M x CS 19 and 84. Higher trihydroxylated compounds were found in M x CS 38 and 90.



## References

- Gómez-Plaza, E., Gil-Muñoz, R., Hernández-Jiménez, A., López-Roca, J.M., Ortega-Régules, A., Martínez-Cutillas, A. (2008). Studies of the anthocyanin profile of *Vitis Vinifera* intraspecific hybrids (Monastrell x Cabernet Sauvignon). *European Food Research and Technology*, 227, 479-484.
- Hernández-Jiménez, A., Gil-Muñoz, R., López-Roca, J.M., Martínez-Cutillas, A., Gómez-Plaza, E. (2009). The inheritance of the anthocyanin and flavonol profile in *Vitis Vinifera* intraspecific hybrids. Communication in: *First International Symposium of Biotechnology of fruit species*. Dresden (Germany).